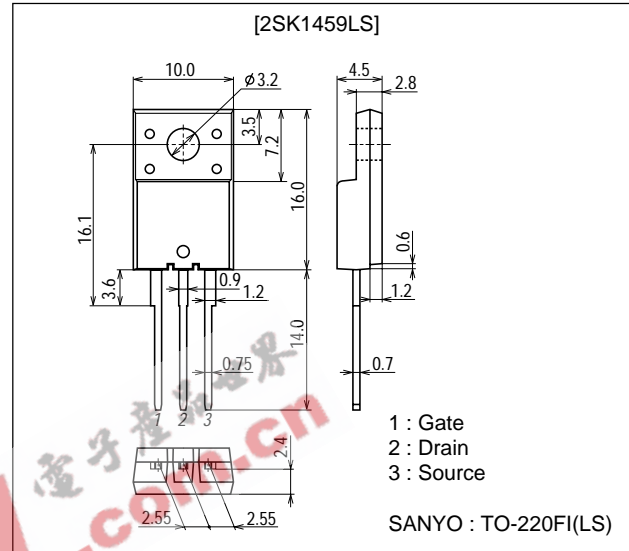


**2SK1459LS****Ultrahigh-Speed Switching Applications****Features**

- Low ON-resistance.
- Ultrahigh-speed switching.
- Micaless package facilitating mounting.

**Package Dimensions**unit : mm  
2078C**Specifications****Absolute Maximum Ratings** at  $T_a=25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings	Unit
Drain-to-Source Voltage	$V_{DS}$		900	V
Gate-to-Source Voltage	$V_{GS}$		$\pm 30$	V
Drain Current (DC)	$I_D$		2.5	A
Drain Current (Pulse)	$I_{DP}$	$PW \leq 10\mu\text{s}$ , duty cycle $\leq 1\%$	5	A
Allowable Power Dissipation	$P_D$		2.0	W
		$T_c=25^\circ\text{C}$	30	W
Channel Temperature	$T_{ch}$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

**Electrical Characteristics** at  $T_a=25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Drain-to-Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$ , $V_{GS}=0$	900			V
Zero-Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=900\text{V}$ , $V_{GS}=0$			1.0	mA
Gate-to-Source Leakage Current	$I_{GSS}$	$V_{GS}=\pm 30\text{V}$ , $V_{DS}=0$			$\pm 100$	nA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS}=10\text{V}$ , $I_D=1\text{mA}$	2.0		3.0	V
Forward Transfer Admittance	$ y_{fs} $	$V_{DS}=20\text{V}$ , $I_D=1.5\text{A}$	0.8	1.5		S

Marking : K1459

Continued on next page.

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- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

**SANYO Electric Co., Ltd. Semiconductor Company**

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N3001 TS IM TA-3433 / 61599 TH (KT) / 72597 TS (KOTO) / 6131 JN (KOTO) No.3462-1/4

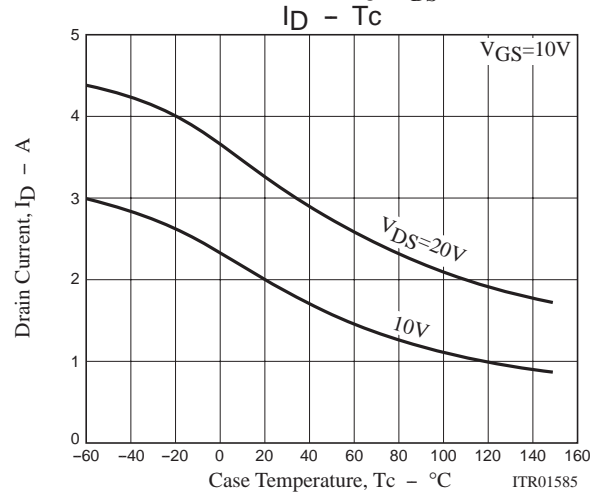
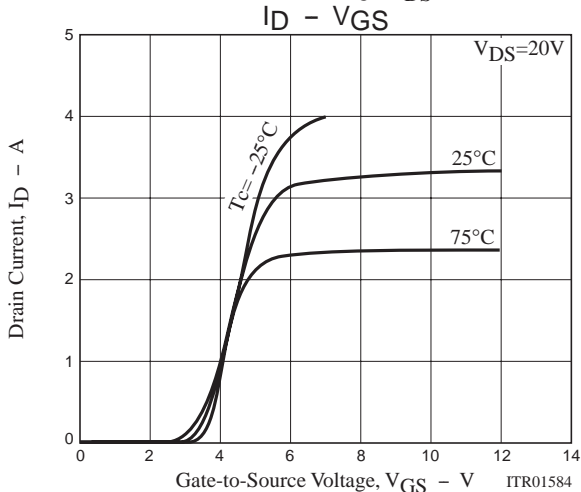
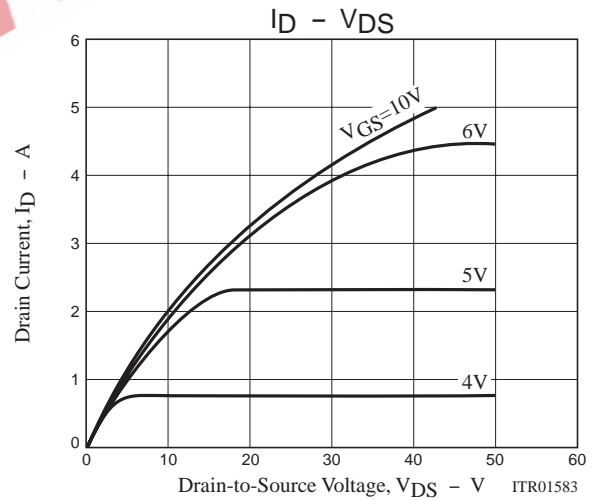
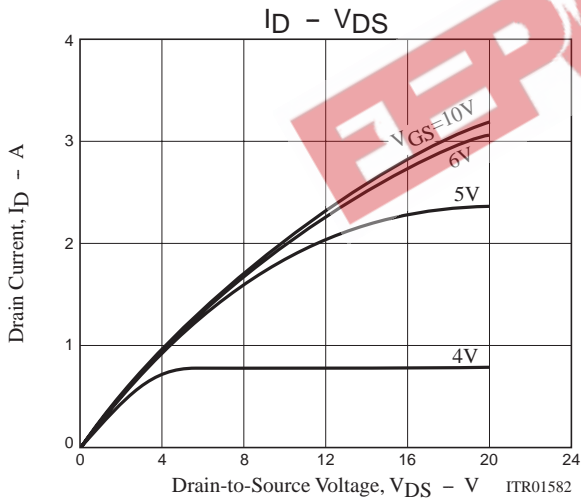
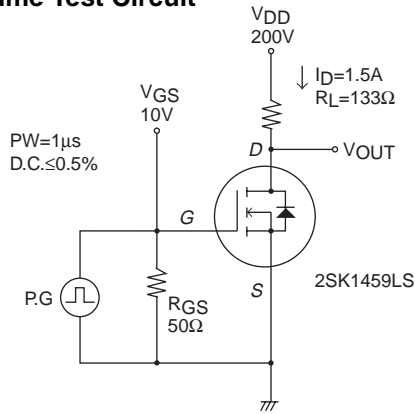
# 2SK1459LS

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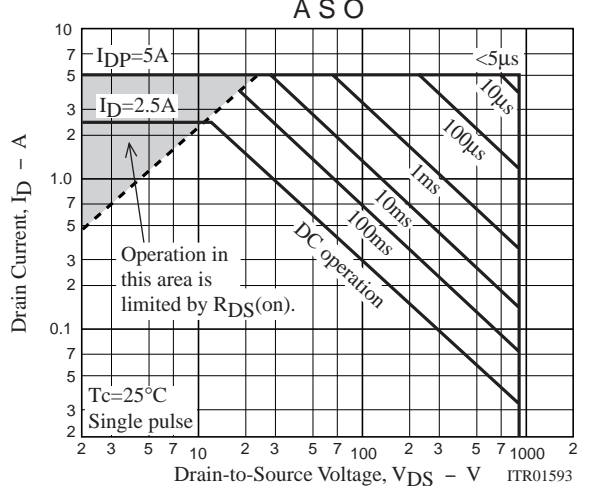
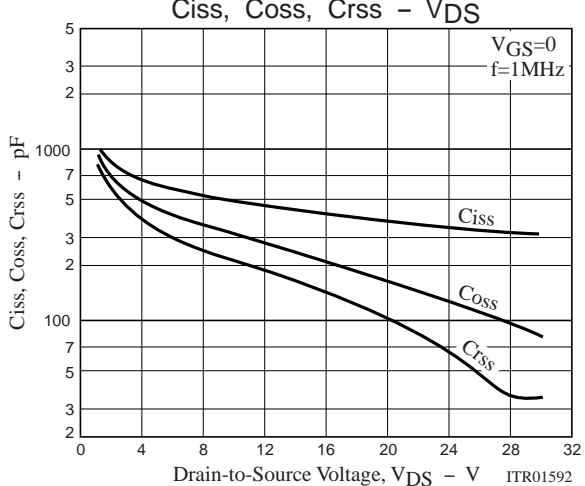
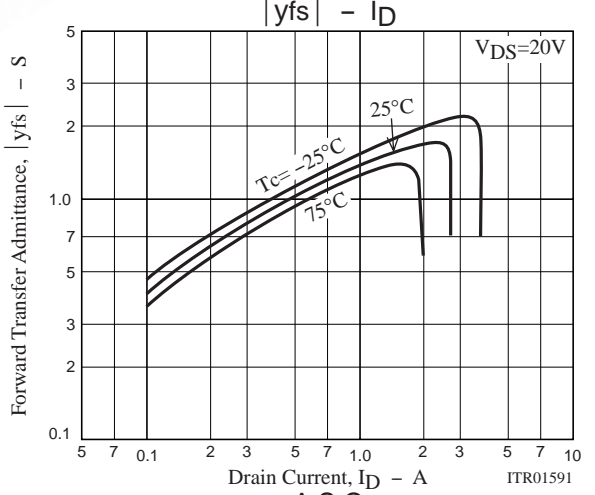
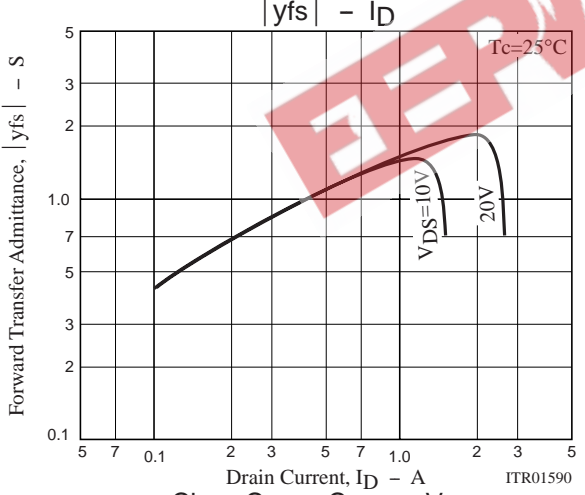
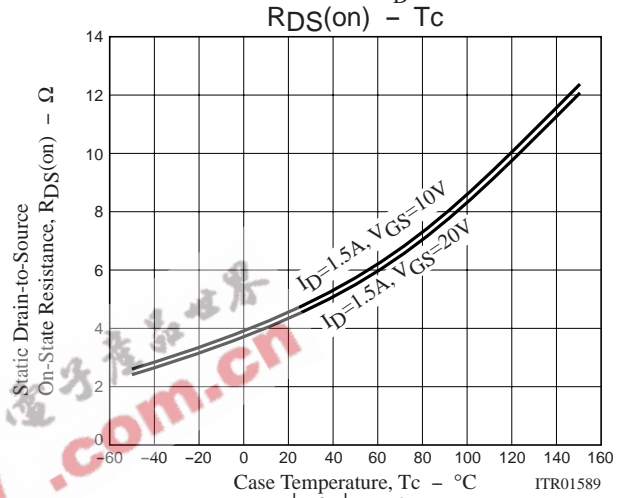
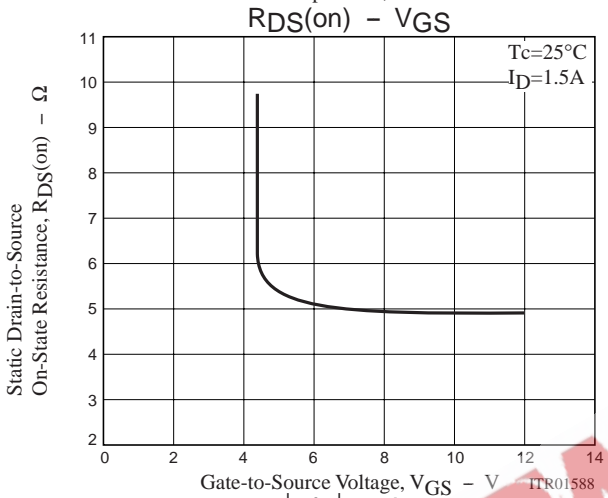
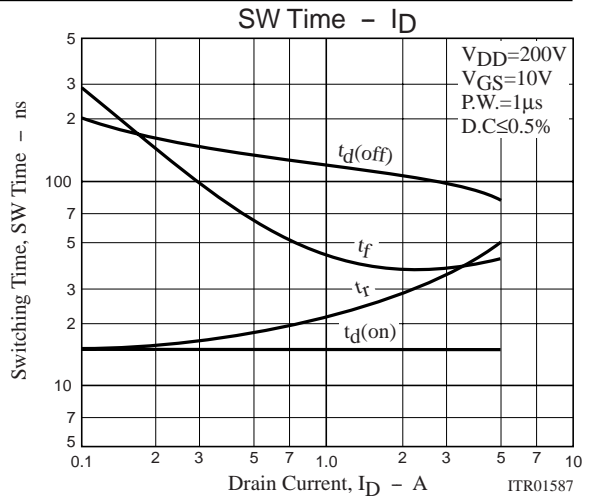
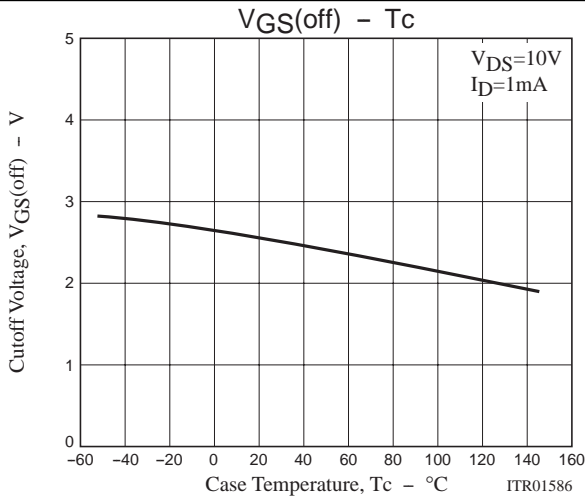
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Static Drain-to-Source On-State Resistance	$R_{DS(on)}$	$I_D=1.5A, V_{GS}=10V$		4.7	60	$\Omega$
Input Capacitance	$C_{iss}$	$V_{DS}=20V, f=1MHz$		350		pF
Output Capacitance	$C_{oss}$	$V_{DS}=20V, f=1MHz$		150		pF
Reverse Transfer Capacitance	$C_{rss}$	$V_{DS}=20V, f=1MHz$		100		pF
Turn-ON Delay Time	$t_d(on)$	$I_D=1.5A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		15		ns
Rise Time	$t_r$	$I_D=1.5A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		25		ns
Turn-OFF Delay Time	$t_d(off)$	$I_D=1.5A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		120		ns
Fall Time	$t_f$	$I_D=1.5A, V_{GS}=10V, V_{DD}=200V, R_{GS}=50\Omega$		40		ns
Diode Forward Voltage	$V_{SD}$	$I_S=2.5A, V_{GS}=0$			1.8	V

(Note) Be careful in handling the 2SK1459LS because it has no protection diode between gate and source.

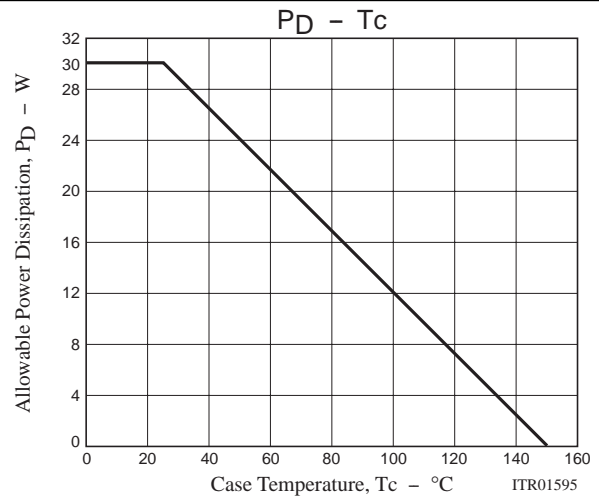
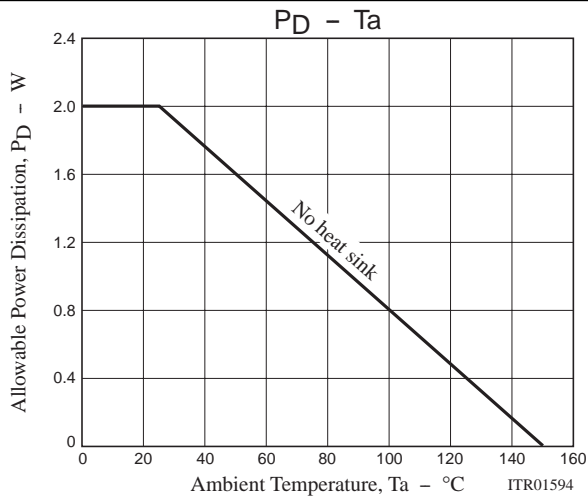
## Switching Time Test Circuit



# 2SK1459LS



## 2SK1459LS



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